

Design Information

Resolite

Translucent Fiberglass Panels

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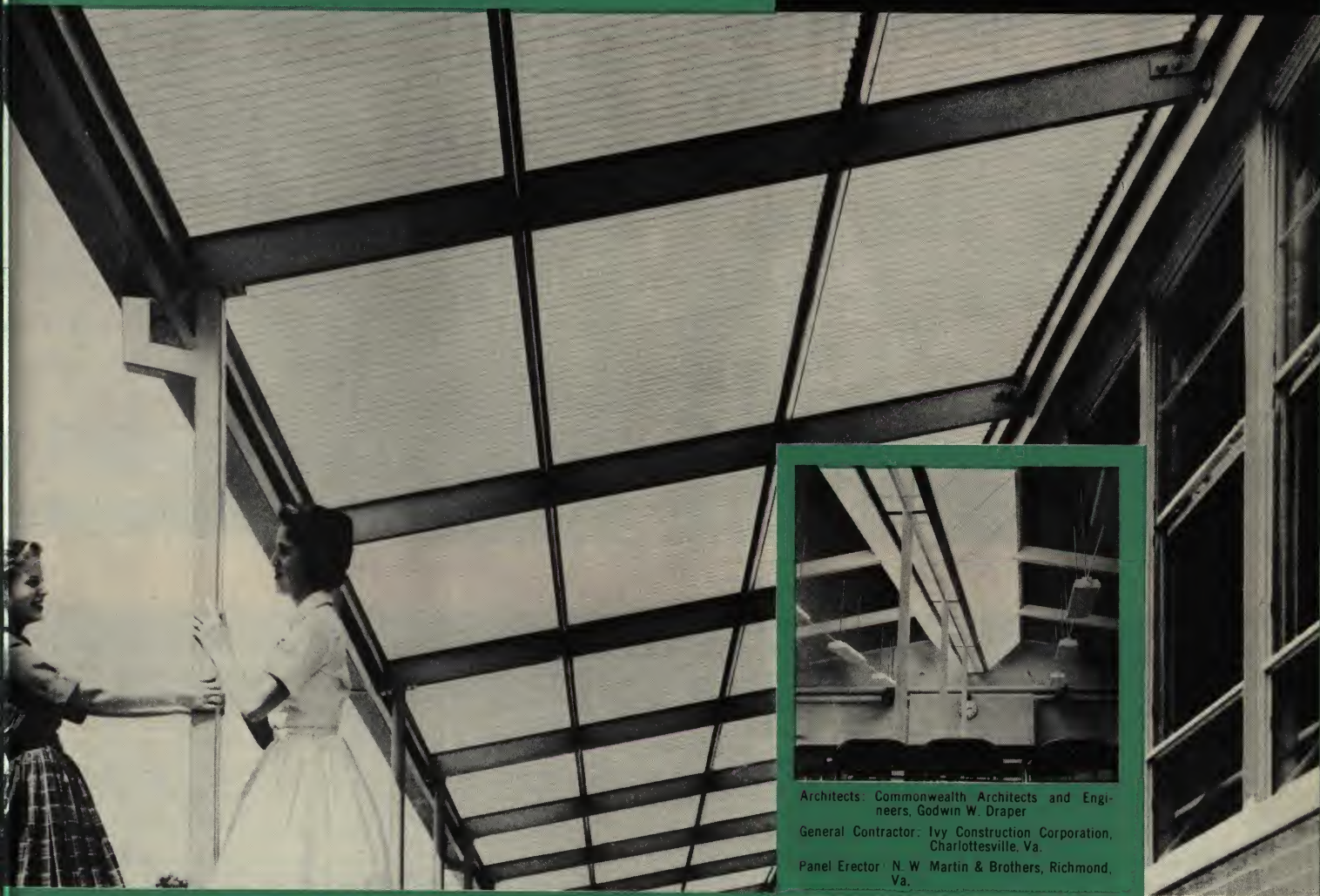
Imaginative Design with Resolite Panels Saves \$200,000

Architects who designed the Tuckahoe Junior High School in Henrico County, Virginia opened the way to a \$200,000 savings in building costs by eliminating inside corridors and designing exterior walkways roofed with Resolite translucent fiberglass panels.

The savings—about \$2.00 per square foot—were possible because of the elimination of an interior wall and a large reduction in total roof area and total enclosed cubage.

The pearl Resolite panels overhang the walkways by nine feet and diffuse light softly at a specified transmission value of 60%. The panels present no fire hazard because they are Resolite's "Fire-Snuf" panels containing a flame-retardant polyester resin. Identical panels are used in skylights which double as plenum chambers. Light coming through these panels is diffused so well that an 18-inch duct casts no visible shadow.

Detailed prints of the daylighting system employed are available for study.



Architects: Commonwealth Architects and Engineers, Godwin W. Draper

General Contractor: Ivy Construction Corporation, Charlottesville, Va.

Panel Erector: N. W. Martin & Brothers, Richmond, Va.

Plus Information on
Security Panel

Exclusively by Resolite!



Resolite Corporation
Zelienople, Pa.

Resolite

**is a distinctive, versatile
material with countless uses
in all types of buildings**

Resolite is a translucent, fiberglass-reinforced polyester resin material available in a wide range of styles and colors and suitable for an unlimited number of applications in residential and non-residential building. Resolite panels are amazingly strong and are shatterproof, thus eliminating the need for replacement because of breakage.

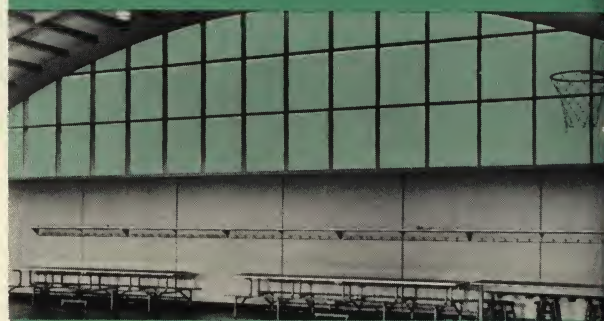
In both artificial and natural light diffusion, Resolite panels perform their function perfectly, providing soft, even light instead of harsh contrasts of brilliance and shadow. In decorative functions, the striking beauty and style of Resolite panels gives the architect and designer the opportunity to create almost any effect he desires.

Resolite is available in a wide selection of colors, finishes, and shapes, specifications for which appear on these pages. Additional information and samples may be obtained by writing Resolite Corporation, Zelienople, Pa.

The interior of this huge plant is fully daylighted because Resolite corrugated panels are nested with the aluminum sheets to form continuous bands of diffused light. The plant, in Cleveland, Ohio, is operated by Alcoa for the U. S. Air Force.

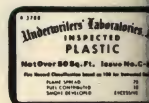


Modern schools like the Smith School at Bremerton, Washington, need Resolute for plenty of light in classrooms and gymnasium. Resolute filters the light so that there are no objectionable areas of shadow and brilliance.



Fire-Snuf Panel.

the industry's first fire-retardant panel labeled and listed by Underwriters' Laboratories, Inc. and first approved by Factory Mutual, and manufactured by Resolite. A flame spread rating of below 75 is available. These panels are available with Super Hardcoat and the process does not affect the UL rating.



Specification data on Resolite Standard, Fire-Snuf and Security Panels

Resolite Standard Panels

"Sheets shall be Resolite as manufactured by Resolite Corp., Zelienople, Pa., composed of light-stabilized polyester resins reinforced with a mat of glass fibers, approximately by weight 70% resins and 30% glass. Weight of sheets shall be approximately ____* lbs. per sq. ft. Color shall be____** and panels shall be installed according to Resolite's current application instructions, employing fasteners as recommended."

*See Table, Page 3 and **Page 4

Resolute Fire-Snuf Panels

"... and panels shall be Fire-Snuf as manufactured by Resolite Corp., Zelienople, Pa., listed and labeled by Underwriters' Laboratories, Inc., and approved by Factory Mutual Engineering Division."

Resolute Security Panels

"Reinforced glazing shall be Security Junior Panel (or Security Panel) as manufactured by Resolite Corp., Zelenople, Pa., composed of light-stabilized polyester resins reinforced with both fiberglass mat and expanded 16 to 18 gauge steel (or .081 gauge aluminum) and lacquer coated."

Technical Data, Security Panels

Technical Data, Security Panels	Security*	Security Junior**
Expanded Metal	16-18 gauge steel	16-18 gauge steel .081 gauge aluminum
Mesh size	¾"	1½"
Fiberglass mat weight	3 oz.	1½"
Thickness (approx.)	.125"	.075"
Weight, lbs./sq. ft.	1.4	Steel .75 — Alum. .63
Impact strength, without rupture	125 lbs.	100 lbs.*
Load deflection	25 p.s.i. 2.5"	25 p.s.i. 3.0"
Adequately fastened on	50 p.s.i. 3.25"	50 p.s.i. 4.0"
4 ft. span	100 p.s.i. 4.25"	100 p.s.i. 5.13"
Estimated Failure Point	200-250 p.s.i.	175-200 p.s.i.

Colors available— *Pale Green, Ice Blue and Semi-Clear.

****Pale Green, Ice Blue, Semi-Clear, Yellow, Sky Blue and Coral.
Available in smooth or embossed finish.**

A unique original in the industry . . .

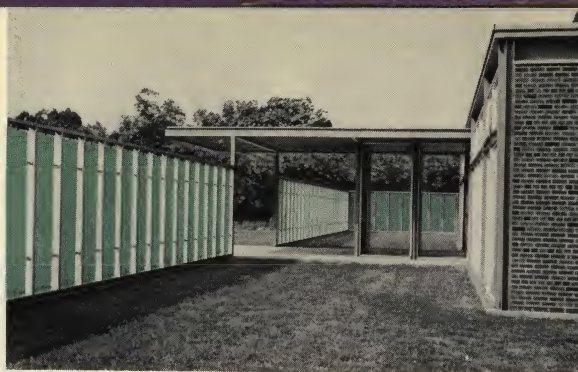
Resolite "Security Panel"

Resolite Security Panel, a revolutionary type of polyester resin panel, is a flat sheet reinforced with both a fiberglass mat and heavy gauge steel or aluminum. It combines the strength of metal and the well-known beauty of translucent Resolite panels.

Security Panel has high dimensional stability because of the metal reinforcement and has been designed to provide exceptionally high impact strength. Because it is virtually unbreakable, it is a superior glazing material for windows, doors and skylights and for protection against unauthorized entry and vandalism.

Visually, the Security Panel gives the appearance of old-fashioned leaded glass and makes an attractive appearance whether light sources strike the panel from the front or silhouette the metal from the rear.

In order to maintain the lustrous finish of the expanded steel, it is first plated with zinc by an electrolytic process. Security Panel is offered by Resolite with two different sizes of mesh of expanded metal and weight of fiberglass mat. Security Junior has a $1\frac{1}{2}$ " mesh and $1\frac{1}{2}$ ounce mat. Standard Security Panel has $\frac{3}{4}$ " mesh and a 3 ounce mat. It is available in sheets up to 4 feet by 10 feet and is coated with Resolite Super Hard Coat for added protection to its glossy surface.



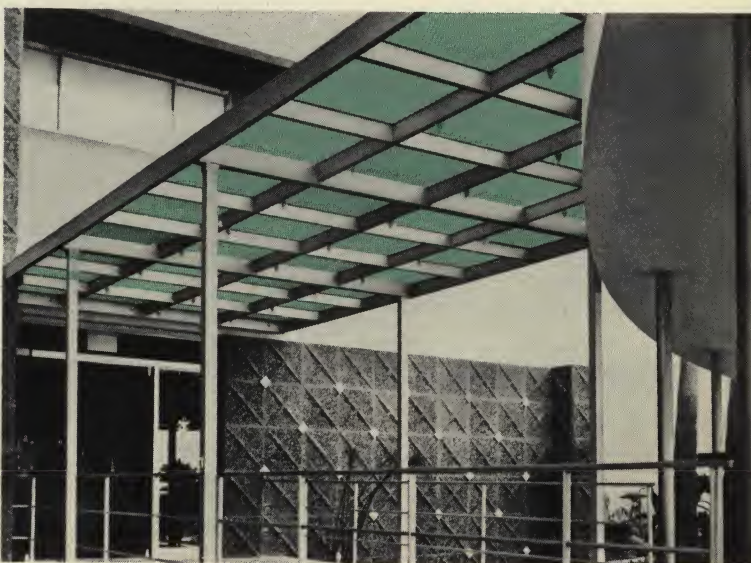
Resolite Security Panel was specified for both interior and exterior use in this modern laboratory, shown above. The vertical panel motif was used for a windscreens and interior partitions. Owner: American Cyanamid Company Research Laboratory Wallingford, Conn.

Architect: Paderson & Tilney New York, N. Y.



A popular use for Resolite Security Panel is shown at the left. Many architects have specified it as a guard on stairways in schools.

Security Panel is used as a canopy, below, to cover a ramp leading to a Miami hotel roof deck swimming pool.



16 to 18 gauge expanded steel or aluminum.

Other Pertinent Facts About Resolite Translucent Fiberglass Panels

Resolite Panel Specifications

	Corrugation	Trim Finish	Type of Sheet	Finished Width	Std. Side Lap	Coverage Width	Standard Lengths	Approx. Wgt. Per Sq. Ft.
	$2\frac{1}{2}$ " Std. ($2\frac{3}{8}$ " Pitch)	1 up, 1 down	roofing	$27\frac{1}{2}$ ", 33", $51\frac{1}{2}$ "	$1\frac{1}{2}$ "	24", $29\frac{1}{2}$ ", 48"	1' to 12'	0.5 lbs.
		both down	siding	26", 40", $50\frac{1}{2}$ "	1"	24", $37\frac{1}{2}$ ", 48"	1' to 12'	0.5 lbs.
	$2.67 \times \frac{3}{4}$ "	1 up, 1 down	roofing	35", $48-1/3$ "	$1\frac{1}{2}$ "	32", $45-1/3$ "	1' to 12'	0.5 lbs.
		both down	siding	$33\frac{1}{4}$ ", 47"	1"	32", $45-1/3$ "	1' to 12'	0.5 lbs.
	4.2"	both down	roofing or siding	42"	1"	$37-4/5$ "	1' to 12'	0.5 lbs.
	V-Beam ($5\frac{1}{2}$ " Pitch) ($1\frac{3}{4}$ " Depth)	both down	roofing or siding	29"	1"	$26\frac{1}{2}$ "	1' to 12'	0.5 lbs.
	V-Beam ($4\frac{7}{8}$ " Pitch) ($1\frac{3}{4}$ " Depth)	both down	roofing or siding	$41\frac{1}{8}$ "	1"	39"	1' to 12'	0.5 lbs.
	Square Rib (4" x 8" Rib) (1" Depth)	1 up, 1 down	roofing or siding	$41\frac{1}{8}$ "	1"	40"	1' to 12'	0.5 lbs.
	Standard Flat	straight	—	up to 42"	window lights are factory cut to order	—	up to 8'	0.4 lbs.
	Security and Security Jr.	—	—	up to 48"	—	—	up to 10'	1.4 lbs. (Security) .75" (Security Jr.)

Notes: Standard quonset sizes and curved sheets available.
All corrugated sheets are available in Smooth and Embossed finishes up to 40" wide. Over 40", Smooth only. Flats and Security Panels available in all widths and in both finishes.

Nominal thickness of all standard sheets is .06". Extra Heavy sheets .09".
Width and length tolerance for all sheets $\frac{1}{4}$ ".
Resolite conforms with Commercial Standard Specifications CS 214-57.

Other Pertinent Facts About Resolite Translucent Fiberglass Panels

Loading Recommendations (Standard Weight Materials)

Based on S.P.I. test procedures, the allowable load for 2½" Fire-Snuf and Standard Resolite Panels, with standard end connections is a minimum of 100 lbs. per square foot.

Span Recommendations (Standard Weight Materials)

Under normal conditions and based on A.I.S.C. specifications for live loads, the recommended maximum purlin and girt spans for the various Fire-Snuf and Resolite corrugations, using standard end connections, and allowing for a safety factor of 2, are as follows:

Corrugation	Pitched roof purlin span	Wall girt span
Standard 2½"	4'-0"	4'-6"
Extra Heavy 2½"	5'-0"	6'-0"
Standard or Extra Heavy 2.67 x ¾", 4.2", V-Beam & Square Rib	5'-6"	6'-0"

Physical Properties (Standard Weight Materials)

Property	Fire-Snuf	Resolite
Nominal Weight, lbs. per sq. ft. (varies with corrugation)	0.50	0.50
2½" and 4.2" corrugation	Standard 0.5#/sq. ft.	Extra Heavy 0.7#/sq. ft.
2.67" corrugation	0.55#/sq. ft.	0.77#/sq. ft.
Nominal Thickness, inches	0.055	0.060
Hardness, Barcol	45-55	45-55
Flexural strength, psi ¹	23,960	22,420
Tensile strength, psi ¹	14,720	10,380
Mod. of elasticity, psi ¹	0.98 x 10 ⁶	1.14 x 10 ⁶
Izod impact, ft. lbs. per inch of notch ¹	13.38	7.80
Coefficient of expansion, in. per in. per °F ¹	17.5 x 10 ⁶	23.2 x 10 ⁶
Thermal conductivity, K factor (per inch thickness)	1.02	1.40
Dielectric strength, RMS volts at 60 cycles	42,600	40,800
Fire Resistance		
Flame spread rating ²	Under 75	—
Fire Hazard Classification ³	Approved:	—
Flammability (A.S.T.M. d-635-44) ¹	Fire Retardant	—
	Self-extinguishing	—

1. Pittsburgh Testing Laboratories, Pittsburgh, Pa.

2. Underwriters' Laboratories, Inc., Chicago, Ill.

3. Factory Mutual Laboratories, Norwood, Mass.

Colors Available

Over the years, Resolite has developed attractive colors, with specific characteristics for better light transmission, visual comfort or purely decorative effect. The standard industrial colors, for example, are recommended for skylighting and other daylighting purposes since they are efficient light transmitters, allowing just the proper amount of light to be transmitted. The decorator colors, like Coral and Foliage Green have been developed for the beauty of their appearance rather than their ability to transmit light.

Light Transmission (SPI Transmissometer)

Industrial Colors

Standard Green*	72%	Foliage Green	30%
Pale Green	80%	SS Yellow*	45%
Semi-Clear*	87%	SS Green	40%
Aqualite*	72%	SS Ivory*	40%
		SS White*	23%

Decorator Colors

Coral	37%	SS Coral	13%
		SS Blue	5%

*Available in Fire-Snuf panels.

Note: Decorator colors available with either standard 2 oz. fiberglass mat or 1½ oz. mat.

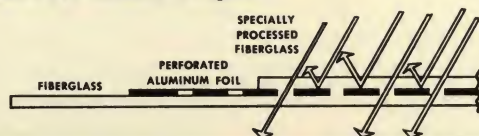
Patent applied for

Resolite

Aluminum Foil + Fiberglass

Foil Glass

A new, distinctive and beautiful panel designed especially for cool, glareless, comfortable patios and other sunshade uses. Available in pastel green, blue, yellow and coral and in 2½" standard corrugation.



For Years
of Additional Life . . .

Resolite Super Hardcoat

This special process provides years of additional life and protection for Resolite exposed to weather and sunlight. Any Resolite daylighting product can be given Super Hardcoat protection at the factory. U.L. approved.



Untreated Protected with Super Hardcoat

(Above sample exposed to severe weathering by the South Florida Test Service.)

If We Can Be of Any Service to You . . .

Years of experience in working with daylighting problems have given Resolite engineers the opportunity to help design thousands of installations that fully meet industry requirements. Please feel free to call Resolite if you would like to discuss any daylighting problem or if you would like additional information about any Resolite product.



Resolite Corporation
Zelienople, Pa.

Resolite Has Available a Complete Line of Accessory Materials

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